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U.S. Department of the Interior
Bureau of Land Management

Environmental Assessment

Carl Anderson — Wichita Placer Mining Plan of Operations

BLM EA No. WY-050–EA14–71

PREPARING OFFICE

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Environmental Assessment

Carl Anderson — Wichita Placer Mining Plan of Operations

Prepared by
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Chapter 1. Purpose and Need for Action:

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1.1. Introduction:

This Environmental Assessment (EA) has been prepared to disclose and analyze the environmental consequences of the Wichita Placer Plan of Operations as Proposed by Carl Anderson. The EA is a site specific analysis of potential impacts that could result with the implementation of a proposed action or alternatives to the proposed action. The EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. "Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of "Finding of No Significant Impacts" (FONSI). If the decision maker determines that this project has "significant" impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record (DR) may be signed for the EA approving the selected alternative, whether the proposed action or another alternative. A DR, including a FONSI statement, documents the reasons why implementation of the selected alternative would not result in "significant" environmental impacts.

1.2. Background:

Carl Anderson proposes to excavate two trenches for gold exploration on the Wichita placer mining claim approximately 1 mile west of Atlantic City in the Rock Creek drainage totaling less than one acre of disturbance. Trenches would be excavated south of Rock Creek in an area disturbed by past mining activities. Ore-bearing material from the trenches would be hauled across Rock Creek creek to the north side to an area previously used for mineral processing. Ore would be run through a wash plant and tailings would be stored in an existing pond and on existing disturbance. In addition, old tailings containing fine-sands would be removed from existing piles and processed on-site. This site overlaps an area with an existing occupancy trespass case that will need to be resolved prior to authorization of this Plan of Operations. This project is located in SE Sec. 11, T. 29 N., R. 100 W., 6th P.M., Fremont County, WY. The proposed project is located entirely on Federal lands.

1.3. Purpose of the Proposed Action:

The purpose of the proposed action is to consider approval of a mining Plan of Operations for the exploration of valuable gold deposits located on existing mining claims.

The content standards of 43 CFR 3809.401, and the performance standards as shown in 43 CFR 3809.420 represent the de facto criteria for determining whether or not a proposed plan of operations could result in unnecessary and undue degradation. As long as the operator's proposed plans of operations meet these minimum standards, BLM has little option but to approve the plan. However, the BLM's objective in considering the Plan of Operations as proposed is to evaluate whether or not it meets these criteria and prevents unnecessary and undue degradation of public lands.

In addition, because the Plan of Operations included a provision to occupy or use the site for other activities purported to be "reasonably incident" to mining, the proponent must seek concurrence from BLM before beginning this use and comply with all provisions of this subpart as defined in 43 CFR 3715, Use and Occupancy Under the Mining Laws.

1.4. Need for the Proposed Action:

BLM's need for this action is reflected in the agency's responsibility to process and approve mining plans of operations that do not violate the "unnecessary and undue degradation" standard of the Federal Land Management Policy Act of 1976 (as amended). This standard was promulgated through the 43 CFR 3809 Surface Management Regulations. The approval is required in order for the mining claimant to exercise his statutory rights to explore for valuable minerals from mining claims located under the provisions of the General Mining Law of 1872 on public lands where the mineral interest is reserved to the United States.

1.5. Conformance to BLM Land Use Plan(s):

- The proposed action is in conformance with the Lander Record of Decision and Approved Resource Management Plan, June 26, 2014.
- The proposed action is outside of any withdrawn areas or proposed withdrawals as determined in the 2014 RMP.
- The proposed action will not result in an amendment to the RMP.

1.6. Relationship to Other Statutes, Regulations or Plans:

The proposed project is subject to the provisions under the Title 43 Code of Federal Regulations (CFR) Part 3809, Surface Management of the Public Lands under Operations of the General Mining Law. Under the requirements of these regulations, the operator must submit a plan of operations describing how activities would be conducted and the environmental resources would be protected to avoid unnecessary and undue degradation.

The activities described in the Plan of Operations (Anderson, 2014) are subject to The Wyoming BLM Standard Mitigation Guidelines for Surface Disturbing Activities (Bureau of Land Management, 1987). The purpose of the "Standard Mitigation Guidelines" is

1. To reserve, for the BLM, the right to modify the operations of all surface and other human presence disturbance activities as part of the statutory requirements for environmental protection; and,
2. To inform a potential lessee, permittee, or operator of the requirements that must be met when using BLM-administered public lands.

The guidelines are written in a format that allows for their direct use as stipulations, and the addition of specific or specialized mitigation following the submission of a detailed plan of operations, and an environmental analysis.

The proposed operations are also subject to the rules and regulations of the State of Wyoming Land Quality Division (WYDEQ-LQD) and the Wyoming Environmental Quality Act.

The BLM and the WYDEQ-LQD operate under the guidelines of a Memorandum of Understanding approved and signed by both agencies in 1990 and amended in 2003.

The WDEQ-LQD would require a License to Explore (LE) and is responsible for establishing the reclamation bond for the proposed project with BLM concurrence.

Joint inspections by BLM and the WYDEQ-LQD are provided for in the Memorandum of Understanding and are employed whenever logistically possible.

1.7. Identification of Issues and Resources:

BLM is directed by guidance, statute and regulation to describe the environment of area(s) to be affected or created by alternatives under consideration. CEQ regulations direct BLM to concentrate efforts on important issues, especially the presence or absence of the potentially significant resources presented in Table 1. All areas presented in Table 1 were considered, but many were determined to not be pertinent to the Proposed Action or affected to a degree of any importance, and therefore, were not carried forward for further analysis. If particular resources are not affected beyond minimal amount, or if the resource is not present, there will be no further discussion of the resources in the Affected Environment (Chapter 3), or in any of the subsequent impact analysis. The discussion of these environmental impacts is therefore restricted to topics related to resources which are affected and carried forward for analysis.

Table 1.1. Potentially Significant Resources

RESOURCE	GUIDANCE OR AUTHORITY
Floodplains	EO 11998; 10 CFR 1022
Wetlands	EO 11990; 10 CFR 1022, CEQ 1508.27(b)(3)
Threatened, endangered, or candidate species and/or their critical habitat, and other special status (e.g., state-listed) species	CEQ 1508.27(b)(9)
Prime or unique farmland	7 USC 4201; CEQ 1508.27(b)(3)
State or national parks, forests, conservation areas, or other areas of recreational, ecological, scenic, or aesthetic importance	CEQ 1508.27(b)(3)
Wild and Scenic Rivers	16 USC 1271; CEQ 1508.27(b)(3)
Natural resources (e.g., vegetation, rangeland, soils, minerals, fish, wildlife, water bodies)	CEQ 1508.8
Coastal Zone areas	16 USC 1451 et seq.
Property of historic, archeological, or architectural significance (including sites on or eligible for the National Register of Historic Places and the National Registry of Natural Landmarks)	EO 11593; CEQ 1508.27(b)(3)(8)
Native American Concerns	EO 13007
Minority and low-income populations (including a description of their use and consumption of environmental resources)	EO 12898
Migratory Birds	EO 13186

1.7.1. Identified Relevant Issues and Resources:

1.7.1.1. Climate, Climate Change and Air Quality:

Potential effects to climate and climate change have been identified in an Instruction Memorandum No. 2008-171 to include analysis of climate change in EA's. Potential short-term impacts to air quality during the mining and crushing operations and long-term impacts for the duration of the project's life were identified.

1.7.1.2. Wildlife including Migratory Birds, and BLM Special Status Species:

Potential effects on wildlife have been identified by BLM wildlife biologists including: Moose Crucial Winter Range, Bats, Sage Brush Obligates, Migratory Birds, and Riparian/Wetland Obligates.

1.7.1.3. Soil Resources:

Potential loss of soil stability and fertility and increase in soil compaction could exist from soil disturbance activities during pit and pond excavation and truck and equipment activities in the Project Area. Exposed soil as a result of removing or disturbing the vegetation is more susceptible to water and wind erosion which causes a loss of soil fertility.

1.7.1.4. Vegetation Including BLM Wyoming Special Status and Noxious/Invasive Plants:

Potential degradation of vegetation resources is possible during operations. The establishment or increase in noxious/invasive plants in the project area could be caused by removal or disturbance of vegetative cover or indirect from vehicles traveling to and from project sites acting as seed sources or carriers.

1.7.1.5. Water (Groundwater and Surface water):

Interactions between Rock Creek, local groundwater, and the proposed trenching is possible. Where surface disturbance occurs, surface water run off could reach nearby drainages during large storm events from portions of the trenches and processing areas resulting in indirect effects to surface water.

1.7.1.6. Wetlands and Riparian areas:

A small portion of the project area is mapped as a potential wetland area consisting of a palustrine, aquatic bed, semi-permanently flooded, man-made wetland by the National Wetlands Inventory, and the possible impacts to this area should be evaluated.

1.7.1.7. Visual Resources

The Project Area occurs in Visual Resource Management Class II Designation. The objective of Class II designation is to retain the existing character of the landscape. The level of change to the characteristic landscape will be moderate. Management activities may attract attention but should not dominate the view of the casual observer.

1.7.1.8. Fire and Fuels

There are significant amount of fuels within the Project Area with the potential to create forest fires particularly with the increased amount of activity in the area as a result of the Proposed Action.

1.7.2. Resources Considered But Eliminated From Further Analysis:

These issues were considered for analysis during the scoping process; however, the issues were eliminated from additional analysis including consideration under the affected environment or environmental consequences for the reasons described below under each resource.

1.7.2.1. Floodplains

No floodplains were observed or identified in the project area.

1.7.2.2. Prime or Unique Farmland:

No prime or unique farmlands were observed or identified in the project area.

1.7.2.3. Wild and Scenic Rivers:

No Wild and Scenic Rivers were observed or identified in the project area.

1.7.2.4. Coastal Zone Areas:

No Coastal Zone Areas were observed or identified in the project area.

1.7.2.5. Minority and Low-Income Populations:

No determination was made regarding the minority and low-income populations of this action. The project is located in an unpopulated area.

1.7.2.6. State, or Natural Parks, Forests, Conservation Areas, or Other Areas of Recreational, Ecological, Scenic or Aesthetic Importance:

No areas relating to these criteria were observed or identified in the project area.

1.7.2.7. Ecological, Scenic, or Aesthetic Importance

No areas relating to these criteria were observed or identified in the project Area.

1.7.2.8. Vegetative and Wildlife Resrouces — Threatened and Endangered Species

BLM Wildlife Biologist determined that no Threatened, Endangered, or listed species or habitats are present in the project area.

1.7.2.9. Rangeland Resources:

The effects to rangeland resources was considered minor, and no impacts would occur to rangeland facilities or to grazing activities by this action.

1.7.2.10. Socioeconomics:

No determination was made regarding the socioeconomics of this action.

1.7.2.11. Wild Horses:

The project areas are outside of any wild horse herd management areas, and no impacts to wild horses are anticipated.

1.7.2.12. Geological Resources:

There are no anticipated geologic hazards or unique geologic features that could potentially be impacted by the Proposed Action or any of the alternatives.

1.7.2.13. Cultural and Paleontological Resources:

This area is within a previously disturbed mining area. Because this site has been previously disturbed, does not penetrate bedrock, and is within quaternary terrace gravel deposits where fossilization is not likely, the potential impacts to paleontological resources is low, and there are no temporary, short-term, long-term or cumulative effects anticipated. This project would not harm any significant historic sites and no impacts to significant cultural resources were identified during the field investigation. However, in order to ensure that no impacts to cultural resources occur, the following measure would apply:

Cultural Mitigation 1:

Any cultural and/or paleontological resources (historic or prehistoric site or object fossil) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or specific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures shall be made by the authorized officer after consulting with the holder.

1.8. Decisions to be Made:

Once the submitted Plan of Operations met the standards for completeness per the 43 CFR 3809.401 content standards, BLM's decision-making is limited to:

- Determining whether the proposed action will or will not result in unnecessary and undue degradation, using the performance standards in 43 CFR 3809.420 as criteria and then either approve or request modification of the plan until the standards are met, and

- Determining whether the occupancy associated with the proposed action meets the criteria and tests set forth in 43 CFR 3715. BLM will determine whether the operator has complied with the requirements of this subpart together with its decision approving or modifying the plan

1.9. Scoping and Public Involvement:

Following the requirements set forth under the Title 43 Code of Federal Regulations (CFR) Part 3809.5, a plan of operations was submitted by the project proponent on June 12, 2014. The plan was reviewed for completeness per the specific requirements found in 43 CFR 3809.401 and determined complete on June 19, 2014. As directed by 43 CFR 3809.411(c), following the receipt of the complete plan of operations, a notice of availability of the plan was published in a newspaper of local circulation or published in a NEPA document.

The notice of availability for the Plan of Operations was published in one local paper, the Lander Journal, on June 29, 2014. No public comments on the plan of operations were received. The comment period ended July 29, 2014.

The project was internally scoped in the Lander Field Office with meetings held between BLM staff.

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Chapter 2. Description of Alternatives, Including Proposed Action:

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2.1. Introduction:

Chapter 2 describes in detail the Proposed Action and alternatives and compares the alternatives in terms of the environmental impacts as identified in Section 1.8, Identification of Issues.

The alternatives described in chapter two consist of:

1. Alternative A- No Action Alternative

2. Alternative B- Proposed Action Alternative

2.2. Description of Alternatives, Including the Proposed Action and No Action:

2.2.1. Alternative A- No Action:

Under the no action alternative, the Wichita Placer Plan of Operations would not be allowed on BLM administered surface which comprises 100% of the project area. Therefore, the BLM would be denying the proponent's right to extract minerals on federal lands. The selection of the No Action alternative may constitute a taking because it violates valid existing rights under the U.S. Mining Laws and result in legal action by the proponent.

Under the No Action alternative, existing land and resource use activities within the project area would continue generally as is, and the operator would be limited to casual use activities and Notice level activities only, which do not allow for mining, only exploration. The Affected Environment descriptions presented in this EA, thus, also constitute the effects of the No Action alternative. The No Action alternative is analyzed in detail in this EA.

The No Action alternative could be selected by the BLM, but such selection must clearly demonstrate that the proposal as designed would cause significant adverse impacts resulting in unnecessary or undue degradation of the public lands or resources. It would then be incumbent upon the proponent to redesign the proposed action to ensure unnecessary and undue degradation does not occur.

2.2.2. Alternative B- Proposed Action:

The Proposed Action consists of the Plan of Operations (Plan) for activities related to the exploration of valuable gold deposits that would constitute approximately 0.25 acres of disturbance. The complete description of the Proposed Action including detailed maps can be found in Mr. Anderson's complete Plan of Operations and is summarized below.

2.2.2.1. Operating Plan:

The Plan consists of excavating two trenches on the south side of Rock Creek and hauling ore-bearing gravel material to the north side of Rock Creek where it will be processed using a wash plant. Existing sand tailings from a nearby pile will be excavated and processed in the wash plant as well. At the processing area one existing small pond will be utilized for tailings management.

2.2.2.2. Schedule

The operations would commence fall 2014, once the Plan is approved. Operations would occur from May 1 to October 31 yearly for approximately 3 years.

2.2.2.3. Equipment

The following equipment would be used for operations: Case 580 Super L Back hoe and Loader, John Deere 4300 Series Back hoe and Loader, self contained screen wash plant with two three inch gas powered water pumps, one small "gold screw," single axel dump truck, and a 24 foot enclosed trailer.

2.2.2.4. Water Management

Water will be pumped from Rock Creek for use in the wash plant where it will be discharged into an existing pond to allow for sediment settling. No discharge from the operation will flow into Rock Creek. Proper permits will be obtained as necessary.

2.2.2.5. Rock and Soil Handling Plans

Topsoil will be salvaged prior to disturbances. Large rock and ore bearing gravels will be separated. Larger rocks will be placed at the bottom of the trenches and finer material will grade upwards until topsoil is replaced.

2.2.2.6. Reclamation Plan

Only two trenches will be excavated, and only one trench will be open at one time, so that reclamation will occur concurrently with operations. Topsoil will be salvaged prior to operations and it will be replaced and seeded after operations in the fall.

2.2.2.7. Monitoring Plan

The operator will comply with all relevant federal, state, and local regulations during mining activities, and will notify the proper authorities if there are any issues during mining. Sustained monitoring plans are not anticipated. Routine inspections to ensure plan compliance shall be conducted jointly by BLM and Wyoming Department of Environmental Quality (WDEQ) personnel.

2.2.2.8. Interim Management Plan

Seasonal closures will occur from October 31 to May 1 yearly. Trenches will be marked and sloped to allow for ingress/egress of animals. Equipment will be removed during the winter. A local resident will monitor the site during temporary closures.

2.4. Alternatives Considered, But Eliminated From Further Analysis:

Alternatives to the proposed action are limited to those actions that would not limit the proponent's ability to explore for and evaluate gold mineralization on their mining claims; therefore, the alternatives that were not included as an Alternative, but were considered at one point during the NEPA process include: **enhanced reclamation goals and requirements**. Therefore, the alternatives were limited to the Proposed Action and No Action Alternatives.

2.5. Comparison of Alternatives:

Table 2.1. Table of Comparison of Alternatives

Alternative	Major Features	Impacts
Alternative A- No Action Alternative	• Deny Free Use Permits • Continue casual use activities only	• Result in the existing environment
Alternative B- Proposed Action Alternative	• 0.25 acres of new disturbance • Water production from Rock Creek	• Impacts to soils, veg, habitat related to 0.25 acres of disturbance • Mining and crushing impacts to air resources • Erosion and sedimentation • Water consumption

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Chapter 3. Affected Environment and Environmental Impacts:

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3.1. Introduction:

This section describes the current conditions, organized by resources, as identified in Section 1.7, Identification of Issues that could be affected by the Proposed Action and the No Action Alternative.

3.1.1. General Setting:

The project area is located along Rock Creek approximately 1 mile west of Atlantic City, Fremont County, WY. This is an historic gold mining area and the project area has been heavily mined in the past for both placer gravels along Rock Creek and through the use of several underground gold mines in the area. In particular, the Lemley Mill is a historic building on the Wichita Placer Claim and several other historic mine features are located on-site. The Wichita Pacer claim also has several buildings and features that are currently unauthorized under the 43 CFR 3715 regulations. Other uses of the area include recreational mining (panning), livestock grazing, wildlife habitat, and recreation (hunting).

3.1.2. Resources/Issues Brought Forward for Analysis:

The level of resources presented are ordered and addressed in the same order presented in Chapter 1. Resources that are not impacted are not of concern in the project area and are not discussed below (see Chapter 1).

3.1.3. General Impact Analysis Assumptions and Guidelines:

This section is based on the resource specialists' reports and provides the analytical basis for comparison of the alternatives. The section organizes the resources as identified in Chapter 1.0; Section 1.7 Identification of Issues, and compares the general current conditions to impacts between the Proposed Action and No Action Alternative.

Impacts have been categorized according to the phase of development and duration of activities on the resources. Temporary impacts would be defined in this section as impacts that occur during mining and processing operations (2 days at a time, weekend activities). Short term impacts would be defined as impacts to the resources that persist after mining and processing operations have been completed in a yearly manner and remain until the site is properly winterized each fall. Therefore, short term impacts primarily consist of the operating season and life of the project or 3 years. Long term impacts would be defined as the duration of the project's life (3 years) plus enough time for reclamation to be determined complete. Therefore, long term impacts could last up to 6 years.

Impacts are also categorized as being direct or indirect, and beneficial and adverse. This analysis identifies these types of impacts and compares the alternatives accordingly. Direct impacts are those that are caused by the action and occur at the same time and place. Indirect impacts are those impacts which are caused by the action and are later in time or further removed in distance, but are still reasonably foreseeable. Sometimes it is difficult to separate these impacts, and so the impacts may be described together.

3.1.4. Cumulative Impacts:

Cumulative impacts refer to impacts on the environment which result from the incremental impacts of the Proposed Action when added to other past, present and reasonably foreseeable future actions. The Cumulative Impacts Analysis Area (CIAA) and Cumulative Impacts Temporal Boundary (CITB) may be different for each resource and will be defined accordingly.

There are several similar projects in the Atlantic City area that could be considered Reasonably Foreseeable Future Developments (RFFDs) such as the Mary Ellen Mine (WYW127480) and placer mining activities along Rock Creek on Private Lands by RC Mineral and Rock.

3.2. Climate, Climate Change and Air Quality:

3.2.1. Description of Climate, Climate Change and Air Quality Resources:

Climate: The project area is located along a creek bottom in a semi-arid, high mountain desert, mid-continental climate regime. The area is typically dry, windy, and has long, cold winters. The nearest meteorological monitoring station is located several miles to the north at South Pass. Average annual precipitation is 11 inches. Most precipitation occurs in this region in the spring and winter months. Average temperatures range between 4.1 degrees F and 34.6 degrees F in January and between 50.8 degrees F and 86.7 degrees F in July. Prevailing wind in this region is west-southwest.

Climate Change: A growing body of evidence indicates that Earth's atmosphere is warming. Records indicate that temperatures in the Wyoming region have risen approximately 1.5 degrees F since the 1960 to 1979 baseline years (GCRP, 2009b). Concentrations of certain gases in Earth's atmosphere have been identified as being effective at trapping heat reflected off Earth's surface, thereby creating a "greenhouse effect." Climate change is likely to combine with other human-induced stressors to further increase the vulnerability of ecosystems to other pests, invasive species, and loss of native species.

Air Quality: Air quality in the area is currently very good, but impacts do exist by being close to South Pass highway and activities that occur around Atlantic City. The extent to which these factors may impact air quality on any given day is dependent primarily on activity, wind conditions, topography, and soil moisture levels.

3.2.2. Impacts to Climate, Climate Change, and Air Quality under Alternative A- No Action:

3.2.2.1. Direct and Indirect Impacts:

The No Action Alternative would result in continuing trends of climate and air quality resource conditions.

3.2.2.2. Cumulative Impacts:

The No Action Alternative would result in continuing trends of climate and air quality resource conditions.

3.2.3. Impacts to Climate, Climate Change, and Air Quality under Alternative B- Proposed Action:

3.2.3.1. Direct and Indirect Impacts:

Climate and Climate Change: Existing impacts and trends on climate and climate change are much greater than anticipated under the proposed action; however, Greenhouse Gas (GHG) emissions associated with equipment used during mining and processing operations would occur. An attempt to analyze the impacts of GHG emissions and other climate change factors that result from the consumption of fossil fuels and other resources produced from the project area would be a highly speculative exercise unnecessary for the land management decisions for which the BLM is responsible. The effects from consumption are not only speculative but beyond the scope of the agency authority or control.

Air Quality: Impacts to air quality in the immediate area being worked would result from dust and fumes from vehicles and excavation equipment employing internal combustion engines. Once on-site, only the dust and exhaust resulting from the individual backhoe excavations and subsequent crushing would contribute to air quality impacts. The duration of these activities indicates that impacts are expected to be temporary but after stockpiling and leaving exposed soils subject to wind erosion, the impacts could continue to be short term as particulate matter is picked up by wind during exposure. However, these impacts would not continue after reclamation or last into the long term.

3.2.3.2. Cumulative Impacts:

Climate and Climate Change: The CIAA for climate and climate change is within 100 km of the project area and would continue for 6 years. Climate change is a global phenomenon impacted by human activities and natural changes around the Earth and the surrounding atmosphere. Analysis of impacts to such a large scale process is beyond the scope of this EA. Because the project area lies within an established oil and gas field in a BLM Wyoming Designated Development Area, other BLM and non-BLM past, present and reasonably foreseeable future actions are expected to increase emissions of Greenhouse Gases in the surrounding area. The Proposed Action would add incrementally to the cumulative impacts to climate change in the CIAA. Initial impacts during the mining and crushing stages from trucks and equipment would be the most pronounced, but these would decrease rapidly after these activities are completed.

Air Quality: The CIAA for air quality is the area within 100 km of the project area. The CITB for air quality in the area is the proposed time frame (3 years). Because the project area lies within an historic mining district, other BLM and non-BLM past, present, and reasonably foreseeable future actions are expected to increase emissions of pollutants in the surrounding area. The Proposed Action would add incrementally to the cumulative impacts to air quality in the CIAA. Initial impacts during the mining and processing would be the most pronounced, but these would decrease rapidly after these activities are completed.

3.3. Wildlife Including, Migratory Birds, and BLM Special Status Species:

3.3.1. Description of Wildlife Including, Migratory Birds, and BLM Special Status Species:

No Threatened, Endangered, or Proposed wildlife or plant species were identified within the permit areas. The permits are also outside of sage grouse core area or sage grouse winter habitat areas. The project area is located within Moose crucial winter range. The following BLM Special Status sensitive species have potential habitat within the permits, but no individuals have been identified: Bats (Long-eared Myotis, Townsend's Big-eared bat), Sagebrush Obligates (Sage Thrasher, Loggerhead Shrike, Sage Sparrow) Migratory Birds (within basin prairie shrub, mountain foothill shrub habitat), Riparian/Wetland Obligates (Northen Leopard frog, Great Basin spadefoot, Boreal Toad, Spotted frog).

3.3.2. Impacts to Wildlife Including, Migratory Birds, and BLM Special Status Species under Alternative A- No Action:

3.3.2.1. Direct and Indirect Impacts:

The No Action Alternative would result in the existing impacts to wildlife including, migratory birds, and BLM special status species.

3.3.2.2. Cumulative Impacts:

The No Action Alternative would result in the existing impacts to wildlife including, migratory birds, and BLM special status species.

3.3.4. Impacts to Wildlife Including, Migratory Birds, and BLM Special Status Species under Alternative B- Proposed Action:

3.3.4.1. Direct and Indirect Impacts:

Direct impacts to wildlife would be considered those impacts that result in mortality or lowered breeding success of wildlife. Through implementation of the proposed action these impacts might include: hitting wildlife on roads during travel; harming or killing wildlife that might fall into pits or other hazards opened during operations; or destroying known nests or significant habitat to the point that the individuals are impacted.

Indirect impacts are those that might not be immediately apparent to individual species but might decrease the breeding success or cause a decline in species' range and diversity through time and continued development. Through implementation of the Proposed Action these impacts might include: disturbing valuable wildlife habitat or nests that would result in decreased breeding success by limiting the habitat and range of a species or impacting water resources that wildlife rely on for survival.

Because no new surface disturbance would occur, direct impacts to wildlife would be minimal but could occur through wildlife interacting with the existing open pits or mining equipment during operations. Noise from construction activities and increased vehicular traffic is expected to have a direct temporary effect on wildlife in the form of displacement and stress concentrated within the project area. Therefore the following mitigation measures will be applied:

Wildlife Mitigation 1:

Surface disturbing and/or disruptive activities are prohibited or restricted between November 15 and April 30 to protect Moose Crucial winter range.

Wildlife Mitigation 2: Surface disturbing and/or disruptive activities that have the potential to cause destruction of nests, eggs or young of migratory birds will be prohibited during the period of May 1st to July 15th. A survey of the proposed disturbance areas may be conducted by the proponent to determine the presence/absence of nesting migratory birds. Nest surveys must be conducted no more than 7 days prior to surface disturbing and/or disruptive activities.

3.3.4.2. Cumulative Impacts:

The CIAA for wildlife might vary depending on species, but the general area is the greater Atlantic City area including most of the Rock Creek or approximately a 10 mile radius from the project area. The CITB for wildlife is approximately 6 years or for the life of the permits allowing for reclamation.

Most of the cumulative impacts to wildlife within the CITB and CIAA are attributed to past mining activities and the activities involved with Atlantic City. This project would cumulatively add to impacts to wildlife from past, present, and reasonably foreseeable future actions; however, because of the scale of the activities considered in cumulative, the project would not significantly add to these impacts.

3.4. Soil Resources:

3.4.1. Description of Soil Resources:

Two ecological sites dominate the project area location: Wetlands and sagebrush-steppe each having 10–14 inches of precipitation per year. According to the Natural Resources Conservation Service's (NRCS, 2014) Web Soil Survey online database, the soils within the permit areas consist primarily of the Venapass-Silas loams, 0 to 6 percent slopes (219) and mine dumps (229) units. The Venapass-Silas loams unit is primarily a gravelly coarse sandy loam, poorly drained, and derived from mixed alluvium.

3.4.2. Impacts to Soil Resources under Alternative A- No Action:

3.4.2.1. Direct and Indirect Impacts:

The No Action Alternative would result in continuing trends of soil resource conditions.

3.4.2.2. Cumulative Impacts:

The No Action Alternative would result in continuing trends of soil resource conditions.

3.4.3. Impacts to Soil Resources under Alternative B- Proposed Action:

3.4.3.1. Direct and Indirect Impacts:

The most direct impacts to soils occur during construction and site preparation that destroys the soil horizons and mixes the soil layers. This procedure dramatically reduces chemical and biological processes. In addition, stripping and subsequently stockpiling the soils result in mixing of the soil layers which then accelerates loss of important plant sustaining nutrients. The majority of these direct impacts have already occurred at the existing disturbed areas from past mining, but additional direct impacts could occur during topsoil stripping of the proposed trenching area and processing. Approximately 0.25 acres of topsoil would be removed or compacted, and would continue throughout the life of the permit resulting in long term impacts and short term impacts in areas that might be reclaimed prior to reclamation. Other direct but short term if not temporary impacts to soil occur through erosion at these locations and would be minimized during reclamation and managed on a site specific basis, see Section 3.7, Water Resources, for more discussion on erosion.

Other direct long term impacts to soil might occur if contaminants such as fuels and lubricants spill into the soil. These spills inherently occur at a sites such as these, but measures will be taken to eliminate these spills or clean up existing spills making these impacts to soils infrequent and minor.

3.4.3.2. Cumulative Impacts:

The CIAA for soil resources is the project area. The CITB for soil resources is the time period required for successful revegetation of the sites disturbed areas (6 years). Most of the cumulative impacts to soils within the CITB and CIAA are a result of past mining activities such as dredging of Rock Creek that have not been reclaimed or were reclaimed poorly. This project would cumulatively add to impacts to soils from past, present, and reasonably foreseeable future actions.

3.5. Vegetation Resources Including Special Status Species and Noxious/Invasive Plants:

3.5.1. Description of Vegetation Resources Including Special Status Species and Noxious/Invasive Plants:

Vegetation within the project area is mostly composed of shrubs such as sagebrush at the outskirts of the disturbance area, willows along the creek, and aspen trees in the trenching area. The trench area is within the Inter-Mountain Basins Montane Sagebrush Steppe (shrub lands) Ecological System which typically contains one or more tree species and sagebrush with an understory

dominated by grasses such as western wheatgrass and indian rice grass. No BLM Sensitive plant species have been identified in the project area.

The processing area is considered part of the Rocky Mountain Lower Montane Foothill Riparian Woodland and consists of shrubland in riparian and wetland areas.

Canada Thistle and cheatgrass have been identified on site; however, these weeds have not occurred in quantities of worry and will be managed appropriately.

3.5.2. Impacts to Vegetation Resources Including Special Status Species and Noxious/Invasive Plants under Alternative A- No Action:

3.5.2.1. Direct and Indirect Impacts:

The No Action Alternative would result in continuing trends of vegetation resources conditions.

3.5.2.2. Cumulative Impacts:

The No Action Alternative would result in continuing trends of vegetation resources conditions.

3.5.3. Impacts to Vegetation Resources Including Special Status Species and Noxious/Invasive Plants under Alternative B- Proposed Action:

3.5.3.1. Direct and Indirect Impacts:

Direct short term impacts to vegetation as a result of topsoil stripping would occur until reclamation is successful on the total approximately 0.25 acres of disturbance associated with the process pits and trenches. Once reclamation occurs, vegetation recovery will likely be slow especially for shrubs like sagebrush; however, the proponent's reclamation plan will include seeding of sagebrush. Noxious/invasive plants are currently not a problem but could appear in the disturbed areas as a result of the proposed action resulting in direct impacts that would only occur in the short term until reclamation. Management of these weeds would be mandated by BLM as they are identified during inspections. However, to ensure that the weeds at these pits are identified and managed the following mitigation measure will be implemented:

Noxious/Invasive Plants Mitigation 1:

The operator/holder will be responsible for managing all noxious and undesirable invading plant species in the reclaimed areas, including cheat grass until the vegetation activities have been determined to be successful. If noxious or invasive weeds are encountered, the BLM and/or the County Weed and Pest Department would be consulted by the operator/holder for suppression and control methods. If chemical herbicide control methods are used on public land, only BLM approved chemicals and application methods will be permitted. A Pesticide Use Proposal (PUP) and written approval from the Authorized Officer for the use of herbicides must be obtained prior to usage of herbicides.

If transport of weeds is identified, mobile equipment being transported from an offsite location to the BLM project area should be cleaned prior to arrival using water, steam, or air pressurized cleaning methods to remove any invasive or noxious weed seed and plant parts or materials that could contain seeds or plant parts. When appropriate, identify sites generally off public lands where equipment can be cleaned. Seeds and plant parts need to be collected and disposed of appropriately.

All mulch, seed and other vegetative reclamation materials must be certified weed free. If available all sand, gravel, and fill materials shall be certified weed free.

In addition, the following weeds need to be controlled should they begin to grow in the project areas: http://www.wyoweed.org/weeds/state-designated-weeds

3.5.3.2. Cumulative Impacts:

The CIAA for vegetation is the greater Atlantic City area including other similar project and AML projects. The CITB for vegetative resources is the time period required for successful reclamation to occur (~15 years). Cumulative impacts to vegetation occur from vegetation removal and traffic primarily related to recreation and mining in the area. With an increase in disturbance and traffic associated with activities in the CIAA, comes an increased potential for weeds to establish in this area. However, the Fremont County Weed and Pest will continue to spray and manage weeds along County roads where they are most prevalent within the CIAA, and better weed management solutions in the future might decrease these impacts.

3.6. Water Resources:

3.6.1. Description of Water Resources:

Surface Water: The project area is directly adjacent to Rock Creek which eventually flows to the Sweetwater River. The Rock Creek drainage at this location and downstream for approximately 10 miles has been significantly impacted by past dredging activities and the creek has now been confined to its existing channel. Despite this major alteration of the drainage water quality or Rock Creek is generally considered pretty good. Some mercury was identified in Rock Creek in the past, but no mercury has been identified in the last several years. Rock Creek is a Class 2AB river that drains 14.6 square miles (USGS, 2014).

Groundwater: The only groundwater within the project area is within the shallow, unconsolidated, alluvial gravels of the Rock Creek drainage. This groundwater is directly influenced by Rock Creek and fluctuates depending on water within the creek.

3.6.2. Impacts to Water Resources under Alternative A- No Action:

3.6.2.1. Direct and Indirect Impacts:

The No Action Alternative would result in continuing trends of water resource conditions.

3.6.2.2. Cumulative Impacts:

The No Action Alternative would result in continuing trends of water resource conditions.

3.6.3. Impacts to Water Resources under Alternative B- Proposed Action:

3.6.3.1. Direct and Indirect Impacts:

Surface Water: Direct impacts to Rock Creek would occur by the operator pulling water out of the creek at 0.2 cubic feet per second (cfs). This is a very minor amount of water considering Rock Creek averages approximately 30 cfs throughout the year. Additional impacts to Rock Creek could occur through sedimentation as a result of crossing the creek from the trench area to the processing area. These impacts would be minimized because of the amount of rocks already located along the river bottom at this crossing. Additionally, this is an existing grossing that has been used for several years. Disturbance from the trenching and processing area is separated by existing berms from Rock Creek as a result of previous mining.

Groundwater: Direct impacts to the shallow groundwater system in the alluvium of Rock Creek could occur through excavating trenches and process ponds below the water table. These excavations could create sedimentation within this unconfined aquifer system; however, these impacts would be short term since the trenches would be reclaimed each fall and the process water pits allow for sediment to settle and infiltration of water back into the groundwater system.

3.6.3.2. Cumulative Impacts:

The CIAA for water and groundwater would be the same which would be the Rock Creek drainage basin which drains approximately 14.6 square miles around Atlantic City. Within this drainage the most significant impacts to Rock Creek and the shallow groundwater in the alluvium of Rock Creek would occur from past mining activities and current uses from private residences along Rock Creek near Atlantic City. These impacts include changes to the geomorphology of the creek, increased sedimentation through disturbance unauthorized dumping or storage near the creek of chemicals or hazardous materials, and permitted water uses that pull water from the creek such as the Rock Creek reservoir above the project area. When combined with other uses within the CIAA, the Proposed Action contributes negligible impacts to water within the Rock Creek drainage area.

3.7. Wetlands and Riparian Areas

3.7.1. Description of Wetland and Riparian Areas:

The majority of the project area is not within a wetlands area but is adjacent to Rock Creek and has some characteristics of a wetland such as willows and tall grasses. A small portion of the project area is considered part of a freshwater pond by the National Wetlands Inventory (NWI). This area generally does not contain water and is created by the tailings from the dredging of rock creek, so it likely does not contain any characteristics of a wetland worthy of protection.

3.7.2. Impacts to Wetland and Riparian Areas under Alternative A- No Action:

3.7.2.1. Direct and Indirect Impacts:

The No Action Alternative would result in continuing trends of wetland and riparian resource conditions.

3.7.2.2. Cumulative Impacts:

The No Action Alternative would result in continuing trends of wetland and riparian resource conditions.

3.7.3. Impacts to Wetland and Riparian Areas under Alternative B- Proposed Action:

3.7.3.1. Direct and Indirect Impacts:

Direct impacts through disturbance could occur to areas with wetland characteristics but not designated as wetlands. However, reclamation would ensure these impacts are short term. Because no chemicals or hazardous materials would be used during processing, no impacts to the existing area designated a freshwater pond would be anticipated. Discharge of overflow water from the processing pond could reach the freshwater pond area and positively impact the water in this area by contributing additional waters to this system. Because no chemicals or deleterious materials would be used during processing, no impacts to the water quality in the wetland areas would occur. Additionally, the applicant would manage for any spills or leaks that might in accordance with the Spill Contingency Plan and in consultation with the BLM and WDEQ.

3.7.3.2. Cumulative Impacts:

The CIAA for wetlands and riparian areas would be the Rock Creek drainage (14.6 square miles surrounding Atlantic City). The impacts would be similar as those described in Water section 3.6. The impacts to wetlands and riparian areas as a result of the project would be negligible as a result of the proposed action when compared to the impacts within the CIAA as a result of past mining and actions along the Rock Creek corridor on private lands within wetland-type areas.

3.8. Visual Resources

3.8.1. Description of Visual Resources

The Project Area occurs in Visual Resource Management Class II Designation as designated in the LFO RMP (2014). The objective of Class II designation is to retain the existing character of the landscape. The level of change to the characteristic landscape will be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Any changes that may repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

3.8.2. Impacts to Visual Resources under Alternative A- No Action:

3.8.2.1. Direct and Indirect Impacts

The No Action Alternative would result in continuing trends of visual resource conditions.

3.8.2.2. Cumulative Impacts

The No Action Alternative would result in continuing trends of visual resource conditions.

3.8.3. Impacts to Visual Resources under Alternative B- Proposed Action:

3.8.3.1. Direct and Indirect Impacts:

Because this project is more temporary than a drilling rig, consists of re-disturbing existing disturbed ground and is located down in the creek bottom that is not visible from many areas, impacts to visual resources would be minimal and the management decision presented in the RMP for visual resource management in Class II areas does not apply (Record #5066).

3.8.3.2. Cumulative Impacts:

The CIAA and CITB for visual resources would be the South Pass ACEC for 5 years. The cumulative impacts from RFFD and existing developments would be minimal with the addition of this project especially considering the temporary nature of this project and small scale of operations as compared to some of the other projects within the CIAA.

3.9. Fire and Fuels Resources

3.9.1. Description of Fire and Fuels Resources

The project area is located in a forested area primarily consisting of dense pine stands and shrub cover as well as aspen trees. There is a significant amount of dead or downed-trees within and near the project area that have been killed by pine bark beetle or other means. These dead trees constitute significant fuels within the project area. Additionally, the Project Area is in close proximity to numerous seasonal and year-round homes within the Atlantic City Wildland Urban Interference (WUI) area. For these reasons, the existing potential for fires within the project area is very high.

3.9.2. Impacts to Fire and Fuels Resources under Alternative A- No Action:

3.9.2.1. Direct and Indirect Impacts

The No Action Alternative would result in continuing trends of fire and fuels conditions.

3.9.2.2. Cumulative Impacts

The No Action Alternative would result in continuing trends of fire and fuels conditions.

3.9.3. Impacts to Fire and Fuels Resources under Alternative B- Proposed Action:

3.9.3.1. Direct and Indirect Impacts:

Because of the high amount of fuels within and near the project area, the potential for fires to occur during the summer and fall within this project area is currently very high. This heavy fuel loading is associated with dense pine stands and shrub cover as well as significant amounts of dead and downed trees throughout the area. Additionally, the proposed action is in direct vicinity to numerous seasonal and year-round homes and public infrastructure associated with the Atlantic City Wildland-Urban Interface (WUI) area. With the increased human and vehicle activity described under the Proposed Action, the potential for human-caused wildfire ignitions will increase. In order to minimize the potential for fires and reduce fuels within the Project area the following Mitigation measure applies:

Fire and Fuels Mitigation Measure 1: The proponent will be required to coordinate with the BLM any fuels reduction activities and will allow for appropriate fuels reduction by BLM personnel when necessary.

3.9.3.2. Cumulative Impacts:

The CIAA for fire and fuels resources would be the Rock Creek drainage surrounding Atlantic City. Beetle killed trees are significant in this area, and the impacts this project area could have on fire and fuels is minor in comparison to the existing and foreseeable impacts within the CIAA.

3.10. Unavoidable Adverse Impacts (All Resources):

NEPA section 102(c) mandates disclosure of "any adverse environmental effects which cannot be avoided should the proposal be implemented" These are impacts for which there are no mitigation measures or impacts that remain even after the implementation of mitigation measures. Implementation of the Proposed Action would result in unavoidable adverse impacts to some resources.

The CEQ 40 CFR 1500.2(e) regulations define unavoidable adverse impacts as those that cannot be avoided due to constraints in alternatives. These impacts do not have to be avoided by the planning agency, but they must be disclosed, discussed, and mitigated, if possible.

3.10.1. Unavoidable Adverse Impacts Under Alternative A- No Action:

Unavoidable adverse impacts to soils, vegetation, and waters would continue through the exposure of the unreclaimed previous disturbance under the No Action alternative.

3.10.2. Unavoidable Adverse Impacts Under Alternative B- Proposed Action:

There would be some unavoidable adverse impacts to soils, vegetation, wildlife, and water resources through surface disturbance and loss of vegetation associated with the Proposed Action. These impacts are inherent of a mining operation like the proposed action, but would be minimized to the extent possible through measures described in the Proposed Action. Therefore, these impacts are not considered substantial and an Environmental Impact Statement is not required.

Unavoidable adverse impacts to soils, vegetation, and water will exist where topsoil is stripped and/or compacted and sedimentation occurs in order to accomplish the Proponent's objective of exploring for valuable mineral deposits on their mining claims. Unavoidable adverse impacts might occur to wildlife where habitat is destroyed and unknown cultural paleontological resources are excavated as a result of the excavation of the trenches and processing areas. These impacts are unavoidable and adverse to the existing conditions; however, none of these impacts would result in undue or unnecessary degradation of public lands as defined in 43 CFR 3809.5

3.11. Relationship of Short-Term Uses and Long-Term Productivity (All Resources):

The CEQ establishes (40 CFR 1502.16) that the balance or trade-off between short-term uses and long-term productivity needs to be defined in relation to the activity in question. The decision maker and members of the public need a clear sense of what they are gaining or losing in both the short and long-term. For the purpose of this analysis, the short-term is considered three months to one year, whereas the long-term is 5+ years.

3.11.1. Relationship of Short-Term Uses and Long-Term Productivity Under Alternative A- No Action:

The short-term continuation of existing impacts to soils, vegetation, surface waters and wildlife would be offset by the benefit that the claimant and other members of the public would have through continued casual use exploration and use of the area.

3.11.2. Relationship of Short-Term Uses and Long-Term Productivity Under Alternative B- Proposed Action:

The short-term impacts of soil compaction/mixing, vegetation removal, and temporary wildlife impacts would be offset by the benefit of having these impacts reclaimed and potential hazards such as the previous mine workings, existing disturbances and trespass issues.

3.12. Irreversible and Irretrievable Commitments of Resources (All):

Irreversible commitments are those that cannot be reversed, except perhaps in the extreme long term. Examples of irreversible impacts would be species extinction, ore extraction, and logging of an old growth forest.

Irretrievable commitments are those that are lost for a long period of time. Extraction of gold samples would constitute irretrievable impacts because these minerals cannot be renewed in their current location.

Impacts from some actions can be both irreversible and irretrievable for some resources. Management actions most likely to result in irreversible and/or irretrievable impacts include those related to development and surface disturbance such as mineral extraction and energy development.

3.12.1. Irreversible and Irretrievable Commitments of Resources Under Alternative A- No Action:

Table 3.1. Irreversible and Irretrievable Commitments of Resources Under Alternative A- No Action

Affected Resource	Irreversible Commitment	Irretrievable Commitment
Climate, Climate Change and Air Quality	No	No
Wildlife Resources	No	No
Soil Resources	No	No
Vegetation Resources	No	No
Water Resources	No	No
Visual Resources	No	No

3.12.2. Irreversible and Irretrievable Commitments of Resources Under Alternative B- Proposed Action:

Table 3.2. Irreversible and Irretrievable Commitments of Resources Under Alternative B- Proposed Action

Affected Resource	Irreversible Commitment	Irretrievable Commitment
Climate, Climate Change and Air Quality	No	No
Wildlife Resources	No	No
Soil Resources	No	No
Vegetation Resources	No	No
Water Resources	No	No
Visual Resources	No	No

Chapter 4. Consultation and Coordination:

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4.1. Persons, Groups, and Agencies Consulted:

Table 4.1. List of Preparers

Name	Title	Responsible for the Following Section(s) of this Document
Tom Sunderland	Geologist	Author
Tim Vosburgh	Wildlife Biologist	Consultation on Wildlife
Craig Bromley	Archaeologist	Consultation on Archaeology
Jeremie Artery	Weed Management Specialist	Consultation on Noxious/Invasive species
Jared Oakleaf	Recreation Planner	Consultation on Visual Resources
Ben Kniola	Assistant Field Manager	Reviewer

4.2. Summary of Public Participation:

Mr. Anderson submitted a Plan of Operations for the Wichita exploration project on June 12, 2014. After several revisions the Plan was determined complete; that is, the standards described at the Title 43 Code of Federal Regulations part 3809.401 had been met, and a notice of availability of the Plan was submitted to the local newspapers at that time. The public was allowed 30 days for review and comment on the Plan beginning on June 29th in the Lander Journal. The public comment period ended on the July 29, 2014 to allow Lander Journal readers adequate time to comment. No comments were received. In addition, this EA will be available on the BLM NEPA Register

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